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Phase-Locked Loop Fiber Optics Communications Link

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PHASE-LOCKED LOOP
FIBER OPTICS
COMMUNICATIONS LINK

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ABSTRACT

The field of fiber optic communications has grown by leaps and bounds. Over the last ten years it has especially grown. With the introduction of digital electronics the ability to transfer data over thousands of miles is as simple as pushing a button. The use of light and the introduction of optoelectronics have made long distance wireless communications very simple and reliable.

This circuit uses a high quality FM free-space signal, which is based on a LM565 phase-locked-loop operating at a frequency of 3kHz (FM). This circuit may be used as wireless communications link a signaling system, or a long-range TV listening link.
This report will describe the process in which I intend to use in the research and construction of a Phase Locked Looped Fiber Optics Communications Link. This project will investigate the theory of phase locked loops and the design methods needed to make the circuit work at its optimum capacity. Also, I intend to research fiber optics as well as the other electrical components in the receiver-transmitter circuit.

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